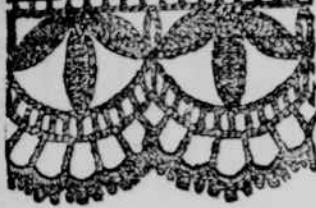


## KNITTING AND CROCHET.

## CROCHETED EDGING.

*From The Weekly Tribune.*

**Torus:** DC, double crochet; P, picot or little loop n side by working 3 chain, and 1 single crochet in first stitch of the chain; S, single; T, treble; L, long—made by turning the cotton twice round the needle instead of once, as in treble.

Begin with 20 chain. In the 19th stitch work 1 DC, 1 T in the 3 next, 1 L on 2 next, 1 T on 3 next, 1 DC. This is for the first leaf of the group of three.

**2d Leaf:** Make 16 chain, 1 DC, on 15th, 3 T, 7 L, 3 T, 1 DC, 3d Leaf: Make 11 chain, 1 DC, on the 9th stitch, 3 T, 2 L, 3 T, 1 DC, 1 DC, on the 9th stitch of the first 20 chain. Make 17 chain—these run along between the sets of three leaves.

Make 11 chain for the first leaf of the next group, which work like the first leaf. Make 16 chain, work on it the second leaf; 11 chain, work on the third leaf; then 1 DC on the end of the 17 chain between the leaves; repeat for the length required.

Do not cut the thread off at the end, but work upon the chain, forming at the top of these leaves this second row:

1T, on first chain, \*1 ch, miss 1, 1 T; repeat the whole length; at the end work 9 chain, 1 DC, on the point of the first leaf of all.

3d row: This connects the tips of the leaves.

\*Work 10 chain, 1 DC, on point of 2d leaf; 10 chain, 1 S, on point of 3d leaf; 9 chain, 1 S, on 9th stitch of the 17th chain; 9 ch, 1 S, on point of the 1st of the next group of 3 leaves; draw this single stitch through the 8 of the 3d leaf of the first group at the same time; repeat the whole length; turn and work the.

4th row: Set up, with a needle, a small card through the eyelets at the bottom, or put last knotted, tying it so as to draw it a little way under the dash. At the top, draw out a small loop from each point, and pass them through a small rubber cord, tying it so as to bring the points of the card just over the upper edge of the dash. Do up in this shape, forcing out the points like points with the major to a uniform size.

Knit round plain once; then knit 5 stitches; slip 1, narrow; then throw the slip stitch over the narrowed one; knit 5, put thread over; knit 1, put thread over. Repeat from \*.

After knitting as above six times round, knit four times round plain. Then commence to narrow and widen again, taking care to alternate, that is, narrow, then widen, then narrow, then widen again, until the last time round, and widen where you narrowed.

Repeat until you have eight rows of points. After the sixth time round of the last row of points, stop widening; but continue to narrow in the same place all the way round, until you have but three stitches between each narrowing; then knit two rows around and purled. Knit once around piano; put thread over two and a half rows. Knit once around piano; puri once and bind off.

## STITCH OVER, KNIT 2 TOGETHER, PURI 7, \* TO END OF ROW, WHEN PURI 11.

5th row: Over, knif 11; \* puri 5, knit 7, puri 5, knit 7, \* to end of row, when knif 13.

6th row: Over, 1 L on 1st stitch, \* 5 ch, 1 L on 3d stitch underneath 7 times; 1 L, miss one underneath. This should be over the joining of the 2 leaves, 1 L, miss 1; repeat the row.

9th row: In the 1st 5 chs, work \* 2 D C, a P, of 3 ch, 3 D C, 1 P, 3 D C, 1 P, 2 D C; repeat in each 5 ch. Tasten off.

It may help readers to comprehend this easier by noting that the groups of leaves are formed first, then the row above them, as shown in the cut—the second row of the instructions, then the row below the leaves—the 3d. The other three rows present no difficulty.

## • KNITTED COUNTERPANES

Mrs. C. J. Stobstrand sends a pretty triangular pattern for a knitted counterpane with the following directions:

Take Dexter knitting cotton No. 10 and 2 medium-sized needles. Cast on 3 stitches.

1st row: Thread over, knit 1, over, knit 1, over, knit 1.

2d row: Over, puri 5, knit 1.

3d row: Over, puri 1, knit 2, over, knit 1, over, knit 2, puri 1.

4th row: Over, knit 1, puri 7, knit 2.

5th row: Over, puri 2, knit 3, over, knit 1, over, knit 3, puri 2.

6th row: Over, puri 2, puri 9, knit 3.

8th row: Over, knit 3, puri 11, knit 4.

9th row: Over, puri 4, knit 5, over, knit 1, over, knit 5, puri 4.

10th row: Over, knit 4, puri 13, knit 5.

11th row: Over, puri 5, knit 6, over, knit 1, over, knit 5, puri 5.

12th row: Over, knit 5, puri 15, knit 6.

13th row: Over, puri 6, knit 1, slip 1, knit 1, pass-purl stitch over, knit 11, knit 2 together, puri 6.

14th row: Over, knit 6, puri 13, knit 7.

15th row: Over, puri 7, slip 1, knit 1, pass-purl stitch over, knit 9, knit 2 together, puri 7.

16th row: Over, knit 7, puri 11, knit 8.

17th row: Over, puri 8, slip 1, knit 1, pass-purl stitch over, knit 7, knit 2 together, puri 8.

18th row: Over, puri 8, puri 9, knit 9.

19th row: Over, puri 9, slip 1, knit 1, pass-purl stitch over, knit 5, knit 2 together, puri 9.

20th row: Over, knit 9, puri 7, knit 10.

21st row: Over, puri 10, slip 1, knit 1, pass-purl stitch over, knit 3, knit 2 together, puri 10.

22d row: Over, knit 10, puri 5, knit 11.

23d row: Over, puri 11, slip 1, knit 1, pass-purl stitch over, knit 1, knit 2 together, puri 11.

24th row: Over, knit 11, slip 3, knit 12.

25th row: Over, puri 12, knit 3 together, puri 12.

26th row: Over, knit 26, 27th row: Over, knit 27; 28th row: Over, puri 28; 29th row: Over, knit 29; 30th row: Over, puri 30; 31st row: Over, puri 31; 32d row: Over, puri 32; 33d row: Over, puri 33; 34th row: Over, knit 34; 35th row: Over, knit 35; 36th row: Over, puri 36; 37th row: Over, puri 37; 38th row: Over, puri 38.

39th row: Over, knit 2, knit 2 together; over, knit 2 together until end of row, when work off astitch plain.

40th row: Over, puri 39; 41st row: Same as 30th row; 42d row: Over, puri 41; 43d row: Same as 30th row; 44th row: Over, puri 43; 45th row: Over, puri 44; 46th row: Over, puri 45; 47th row: Over, puri 46; 48th row: Over, knit 47; 49th row: Over, puri 48; 50th row: Over, knit 49; 51st row: Over, puri 50; 52d row: Over, puri 51; 53d row: Over, puri 52; 54th row: Over, puri 53; 55th row: Over, puri 54; 56th row: Over, puri 55.

57th row: Over, puri 2; knit 1, over, knit 1, over, knit 1, puri 7, knit 1, over, knit 1, over, knit 1, over, from 1 to end of row, when puri 1.

58th row: Over, knit 1; \* puri 5, knit 7, puri 5, knit 7, \* to end of row, when knit 3.

59th row: Over, puri 3; \* knit 2, thread, knit 1, over, knit 2, puri 7, knit 2, over, knit 1, over, knit 2, puri 7, \* to end of row, when puri 2.

60th row: Over, knit 2; \* puri 7, knit 7, puri 7, \* to end of row, when knit 4.

61st row: Over, puri 4; \* knit 3, over, knit 1, over, knit 3, puri 7, knit 3, over, knit 1, \* to end of row, when puri 3.

62d row: Over, puri 3; \* puri 9, knit 7, puri 9, knit 7, \* to end of row, when knit 5.

63d row: Over, puri 6; \* knit 5, over, knit 1, over, knit 4, puri 7, knit 4, over, knit 1, over, knit 4, puri 7, \* to end of row, when puri 4.

64th row: Over, puri 4; \* puri 11, knit 7, puri 7, puri 7, \* to end of row, when knit 6.

65th row: Over, puri 6; \* knit 5, over, knit 1, over, knit 5, puri 7, knit 5, over, knit 1, over, knit 5, puri 7, \* to end of row, when puri 5.

66th row: Over, puri 5; \* puri 13, knit 7, puri 5, puri 7, \* to end of row, when puri 6.

67th row: Over, puri 7; \* knit 6, over, knit 1, over, knit 6, puri 7, \* to end of row, when puri 5.

68th row: Over, knit 6; \* puri 15, knit 7, puri 6, knit 7, \* to end of row, when knit 8.

69th row: Over, puri 8; \* puri 1, knit 1, puri 8, puri 7, \* to end of row, when puri 5.

70th row: Over, puri 7; \* puri 2, puri 2, puri 7, puri 7, \* to end of row, when puri 6.

71st row: Over, puri 9; \* slip 1, knit 1, pass-purl stitch over, knit 9, knit 2 together, puri 7, \* to end of row, when puri 8.

72d row: Over, puri 10; \* slip 1, knit 1, pass-purl stitch over, knit 7, knit 2 together, puri 7, \* to end of row, when puri 10.

73d row: Over, puri 10; \* slip 1, knit 1, pass-purl stitch over, knit 7, knit 2 together, puri 7, \* to end of row, when puri 10.

74th row: Over, puri 9; \* puri 7, knit 7, puri 7, puri 7, \* to end of row, when puri 11.

75th row: Over, puri 11; \* puri 9, knit 7, puri 9, puri 7, \* to end of row, when puri 12.

76th row: Over, puri 12; \* slip 1, knit 1, pass-purl stitch over, knit 9, knit 2 together, puri 7, \* to end of row, when puri 12.

77th row: Over, puri 12; \* slip 1, knit 1, pass-purl stitch over, knit 9, knit 2 together, puri 7, \* to end of row, when puri 12.

78th row: Over, puri 12; \* slip 1, knit 1, pass-purl stitch over, knit 9, knit 2 together, puri 7, \* to end of row, when puri 12.

79th row: Over, puri 12; \* slip 1, knit 1, pass-purl stitch over, knit 9, knit 2 together, puri 7, \* to end of row, when puri 12.

80th row: Over, puri 12; \* slip 1, knit 1, pass-purl stitch over, knit 9, knit 2 together, puri 7, \* to end of row, when puri 12.

81st row: Over, puri 12; \* puri 14; \* knit 3 together, puri 7, knit 3 together, puri 7, \* to end of row, when puri 12.

82d row: Over, knit 69; 83d: Over, knit 70; 84th: Over, puri 71; 85th: Over, knit 72; 86th: Over, puri 73.

Now cast off as loosely as possible.

Mrs. S. adds: This completes one triangle, 4 of which make a square. Crochet or overseam them together. The former is far preferable. I crochet the triangles together with one SC and one ch between; 49 squares, 7 in length and 7 in width, make a good sized quilt. The squares I crochet together with SC without any chain between.

KNITTING AND CROCHET.

CROCHETED EDGING.

*From The Weekly Tribune.*

## SCIENCE FOR THE PEOPLE.

## PLANETS AS NON-DISTURBERS.

At a recent meeting of the astronomical section of the Minnesota Historical Society, Mr. S. J. Corrigan read a sensible paper showing that the near approach of several of the great planets to the sun and earth cannot produce any unusual disturbance. The only rational method, he says, of learning whether the forces radiating from the planets can appreciably affect the earth, is to subject them to analysis according to the fundamental laws that govern all forces. The principal law is that all radiant forces diminish in intensity as the square of the distance through which they are exerted increases, and vice versa. When Jupiter is in perihelion, once in twelve years, and in conjunction with the earth, he is 23,000,000 of miles nearer to the sun and to us than when he is at his average distance. Saturn, once in nearly thirty years, is under similar circumstances, 50,000,000 of miles nearer than his average distance.

These approaches may seem great enough to produce considerable effects, but they are in both cases only one-twentieth part of the average distances of these planets. The intensity of Jupiter's disturbing action when he is 23,000,000 of miles nearer to us will be only one-tenth greater than the average force which he exerts, and it is only this increase that can produce disturbance; the average force cannot, as it is constant. Whether an increase of only 10 per cent will affect the earth depends upon the intensity of Jupiter's average force. But it can be shown that his whole force is inappreciable. Once in each year the earth approaches to and recedes from Jupiter by about 183,000,000 miles, or about eight times the distance by which Jupiter approaches us at perihelion, once in twenty-four minutes. One of these predictors has already done good service in prefiguring the tides for Indian ports during the current year.

## KNITTED COVER FOR DISH.

Mrs. A. Brooklyn kindly sends the following account of a pattern formerly printed in this department. Many a housewife has been annoyed at the unsightly platter of her baked puddings, macaroni, beans, tomatoes, and the like, as they come to the table.

Make 11 chain for the first leaf of the next group, which work like the first leaf. Make 16 chain, work on it the second leaf; 11 chain, work on the 17 chain between the leaves; repeat for the length required.

Do not cut the thread off at the end, but work upon the chain, forming at the top of these leaves this second row:

1T, on first chain, \*1 ch, miss 1, 1 T; repeat the whole length; at the end work 9 chain, 1 DC, on the point of the first leaf of all.

3d row: This connects the tips of the leaves.

\*Work 10 chain, 1 DC, on point of 2d leaf; 10 chain, 1 S, on point of 3d leaf; 9 chain, 1 S, on 9th stitch of the 17th chain; 9 ch, 1 S, on point of the 1st of the next group of 3 leaves; draw this single stitch through the 8 of the 3d leaf of the first group at the same time; repeat the whole length; turn and work the.

4th row: Set up, with No. 6 crochet cotton, say 400 stitches, some number divisible by 14. This will serve for a dish, say 3½ inches in height, 9 inches wide at the top and 5½ at bottom, and can easily be adjusted to one slightly larger or smaller. Use medium-sized needles. Use six for greater ease in working. Put 67 stitches on two and 68 on four. Observe in alternating to keep the centre stitch in line, and in the centre of each point throughout the row.

5th row: This is the first row of the pattern, which work like the first leaf. Make 16 chain, work on it the second leaf; 11 chain, work on the 17 chain between the leaves; repeat for the length required.